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## ABSTRACT

Education in general and special education in particular are undergoing rapid and dramatic changes, and a number of current trends offer implications for future policy and practice. It is becoming clear that principles of special education are shaping the future of all education. As schools become more inclusive, attention is focused on accommodating student diversity, emphasizing the role of the learner in creating knowledge, and supporting individualized instruction and assessment. Early education is increasing, with the major goal of preventing learning problems. As regular and special education merge, individualized programs and cooperative practices are becoming available to all students. As school structures change, so too will preservice and inservice programs that prepare educational personnel. Emerging trends in professional education include integrated interdisciplinary models for joint preparation of regular and special educators, social workers, therapists, and other personnel; innovative delivery systems such as field-based models, distance education, and alternative certification; and evolving national standards to promote consistency in training and licensing across states. Technological advances have particular significance for special needs students, especially in the areas of assistive devices, multimedia instruction, and distance education. Changes in practice will lead to changes in educational policy on a broad scale. The inclusion movement will lead to a unified educational system that provides special services to every child based on identified needs. Early intervention and high school transitional services will become commonplace. Contains 24 references. (SV)

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## SPECIAL EDUCATION IN THE 21ST CENTURY

### Introduction

Education in general, and special education in particular, represent a profession that is undergoing rapid and dramatic change. Although no one can predict with accuracy what special education will look like in the next century, a number of current trends provide clear implications for future policy and practice. Five broad social movements now underway will no doubt influence the shape of special education in years to come: demographic changes; social structure shifts; educational reforms; technology development; and, moral and ethical renewal. Such changes are already impacting the attitudes that people have toward individuals with disabilities, the nature of services provided by schools, and even basic understandings of the teaching-learning process. These trends offer a tantalizing glimpse into the program features, personnel roles, and controversial issues that special educators will likely experience after the year 2000.

### Individualized Instruction

It is becoming quite clear that the principles of special education are shaping the future of all education. As Diane Ferguson points out in a recent Kappan article (Ferguson, 1995), there are three major directions which are taking place as our schools become more inclusive. The first is that schools are becoming less structured around students' abilities and more around students' diversities. Secondly, there is a shift from teachers being disseminators of content that students must learn toward approaches that emphasize the role of the individual learner in creating knowledge, competence, and the ability to pursue further learning. And, thirdly, the school's role is changing from providing educational services to providing *individualized* support for learning.

A recent article in the New York Times (Goodnough, 1997) lends support to this trend towards individualizing, not only instruction, but assessment as well. In Maplewood, New Jersey report cards use to be a simple affair: grades for each subject, with space for teachers' comments. Now all seven-year-olds will be receiving grades for not just math, language arts, social studies, and science, but for more than 150 skills in 10 subject areas: whether they understand fractions, use vivid language, and sing on pitch, for example. The new cards will even measure children's willingness to elaborate feelings, take risks, and accept responsibility for their behavior.

There is little doubt that early education, strongly advocated by special educators for many years, will continue to increase. Prevention of learning problems will become a major goal for these programs. A review of 36 studies of model demonstration projects and large-scale public school programs to examine the long-term effects of early childhood programs was completed by Steven (1995). He concluded that early childhood programs produced significant short-term benefits on intelligence quotients and important long-term benefits on school achievement. There clearly will be a growing need for special educators to function as early childhood intervention specialists.

Special education, in its broadest sense, may well become the solution to many of our school problems. Data collected during the Ravenswood Project (Lombardi, 1994), indicated less truancy, fewer behavior problems, and maintenance of grades for the *entire* high school population as regular and special education became merged. Cooperative learning, peer tutoring,

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and individualizing programs in many schools are no longer a special education domain but available to any student, including those considered at risk for failure.. And students without specific disabilities are learning to become helping, caring members of a school community. In addition, there is a real concern about the cost of maintaining both a general and a special education program structure. It is not unusual for special education costs to exceed 30% or more of a school system's budget. In the Boston public schools average class size could be reduced from 26 to 13 students if categorical dollars earmarked for special education could be directed to the general class environment (Odden, Monk, Yasser & Picus, 1995). Such a class size would go a long way in individualizing programs for each student.

As we enter the next century we envision many program and placement choices to meet individual needs, but they will not be separated by arbitrary structures.. Section 504 of the Rehabilitation Act, the responsibility of general education, will become a large umbrella for *all* students who require some additional assistance to reach their learning potential . And, although we predict the continuum of service configurations will be maintained to assure individualization, the vast majority of students with special needs will be educated in general programs.

### **Personnel Preparation**

As school structures serving students with special needs change, so too will the preservice and inservice programs that prepare educational personnel. Integrated education initiatives create a pressing demand for personnel trained in cross-disciplinary perspectives and collaboration skills. Some schools of education have begun to train general educators and special educators together to insure that all have the relevant knowledge and skills to work effectively in inclusive classrooms (Sindelar, et al., 1995). To enable related service specialists to provide integrated therapy in classroom contexts and to work on transdisciplinary teams, university affiliated programs have implemented interdisciplinary training models for joint preparation of educators, social workers, speech/language clinicians, physical/occupational therapists and other personnel (Bricker & LaCroix, 1996). Such integrated training models require shifts in how academic units are organized, how individual faculty members are assigned and evaluated, and how learners are taught and assessed, shifts that will result in significant alterations in the structure and operation of teacher education programs in the next century.

The persistent shortage of appropriately trained special education personnel in many areas of the country has led to the development of a number of innovative personnel preparation programs that use unique delivery systems to recruit, train, and retain new special educators. Field-based models allow practicing, but uncertified teachers to complete certification requirements while they are employed, providing much-needed access to on-the-job training to rural special educators (Berkeley & Ludlow, 1991). Distance education options utilize a variety of telecommunications technologies to train preservice students and inservice educators who are unable to come to campus for training due to travel conditions or personal constraints (Howard, Ault, Knowlton, & Swall, 1992). And, alternative certification models bypass traditional teacher education programs as well as existing certification standards to train prospective teachers on the job, enticing college graduates and career changers to enter the education profession more easily. (Sindelar & Marks, 1993). All three of these options have been widely used in special education, and they have been especially effective in attracting new teacher candidates into low incidence disabilities and inner city special education programs. Although each of these innovations has both supporters and detractors, their success in increasing the pool of special education personnel and providing new employment opportunities for individuals from minority cultural groups and isolated rural areas guarantees that they not only will continue for many years to come, but even suggests that they may become the predominant mechanisms for preparing special educators in the future.

Calls for education reform have led to increasing interest in the identification of national standards for teachers, a change that would greatly impact the supply of special educators. As social changes have made populations increasingly mobile and teachers cross state lines in search of better salaries and working conditions, the need for consistency in training and licensure becomes more important, especially in an area with complex requirements such as special education (Lilly, 1992). The Council for Exceptional Children, in collaboration with the National Council for the Accreditation of Teacher Education, has published a set of professional standards to define the knowledge base for preparation programs and to specify a common set of competencies to inform certification requirements for special educators in each area of specialization (Council for Exceptional Children, 1995). The National Board for Professional Teaching Standards also has issued a draft document that outlines their version of competencies needed by educators across all age levels and roles. These developments point to the imminent achievement of some professional agreement on a core of knowledge and skills needed by special educators. National standards will promote the consistency in training across personnel preparation programs as well as in licensing across state educational agencies that will enhance the future delivery of school services to students with special needs.

### **Emerging Technologies**

Advances in technology are producing major changes in education. The use of microcomputers, robotics, assistive-adaptive devices, and medical technology are altering curriculum objectives and instructional methods for all students. However the impact has been especially significant for students with special needs. Individuals with severe disabilities are being helped to respond to instruction and participation by means of response systems that rely on basic motions such as eye gazing, or by microswitches that operate with the press of a cheek or puff of breath. Voice activated computer programs are beginning to allow students with motor impairments to dictate written assignments and improve their academic performance. Children with visual disorders are using computer scanners and voice synthesizers to read aloud a page from any book. Students with specific learning disabilities are beginning to use word processors with grammar and spelling checks to demonstrate their comprehension of key ideas without interference from information-processing problems. And individuals with multiple disabilities are beginning to use robotics and remote control devices to operate a wide range of equipment in their environments for personal care, environmental control, employment opportunities, and total enhancement of their independence and self-esteem.

The use of multimedia instruction using videodiscs will be common place as we enter the new century. It will prove to be especially effective for students with social and behavioral problems. Wissick (1996) concludes that multimedia will provide teachers and students with a powerful tool to access a combination of media for enhancement of instructional events and learning. It can increase motivation, maintain attention, stimulate cognition and illustrate content and fact. As we enter the new century, multimedia will have a profound effect on how schools are structured and how we teach.

Perhaps the greatest current technological trend that will be common place in the future is distance education. Today, educators are using audioconferencing, computer networking, and television transmissions to expand the range of services and programs offered to students with special needs as well as to their teachers. This is especially true in states which have many rural communities. For instance, The University of Maine in Farmington has been making special education training available through the Interactive Television System of Maine's Education Network. Since course delivery began in 1993, average enrollment has been 100 students statewide (Gamble, 1995). As Ludlow (1995) notes "distance education is the future of rural special education". She states "by the turn of the century, telecommunications will connect every educator in every school, no matter how small, remote, or underfunded."



## Policy Development

The history of education reflects a circular social change process in which experimental changes in practice on a small scale lead to adoption of these changes as policy, which in turn lead to broader changes policy implications for practice on a wide scale. Although advances in general education and advances in special education have often proceeded along parallel tracks, most recently education reformers on both sides have called for a single system of schooling that meets the needs of all children. The success of early education efforts in increasing the achievement of children with disabilities, delays and risk conditions has generated interest in providing such support services to more families facing the challenges of childrearing in today's world. And, the recognition that careful transition planning is critical to the adult outcomes of students with special needs is pointing to the need for school-to-work initiatives for all students.

Visionaries have long recognized that the fundamental tenets of special education theory and practice could easily be applied to improve schools in ways that would benefit all students. Special education practices such as individualized instruction and assessment, family-professional collaboration, and student support networks, have focused new interest in creating schools that promote equal educational opportunity and maximize the individual potential of *all* students (Gartner & Lipsky, 1990). The inclusion movement itself is not so much about providing access to regular classrooms for students with disabilities, as it is about creating schools and programs where all children can belong, learn and contribute (Stainback & Stainback, 1990). Thomas Skrtic, in his thought-provoking book, *Disability and Democracy* (1995), argued that the aims of a democratic society in the postmodern age are best accomplished by a school system that celebrates population diversity, promotes individual accomplishment and group cooperation, and develops skills for lifelong learning. A unified system of education that provides special services to every child based on identified needs rather than disability categories, in the context of group activities and relationships, will be a defining characteristic of schools in the next century.

It is now clear that society can gain many advantages by providing broader social supports to children and their families, similar to those that have been advocated and even provided by special educators for many years. A number of organizations have examined the challenges to child development and family functioning presented by poverty, homelessness, cultural differences, and home and community violence and called for widespread prevention and intervention efforts (Children's Defense Fund, 1994). Early intervention programs, now available in most areas of the country as a result of federal and state legislation, have offered comprehensive interdisciplinary services to young children with special needs along with a variety of social supports for their families for over a decade (Simeonsson, 1994). The recent America 2000 initiative set national goals for insuring school success for all children that will necessitate the application of an early intervention model to a broader range of children and families (Reich, 1992). These developments, along with a growing awareness that schools are the center of community life (especially in rural areas) will lead public school systems to offer a wider range of educational, social, and health services to individuals across the lifespan in the next century.

Assisting students to make a successful transition from school to adult life is an issue that has long challenged special educators, but now confronts general educators as well. Despite federal legislation mandating transition planning and programming for students with special needs since 1983, many young people with disabilities make a poor adjustment to adult life (Sitlington, Frank, & Cardon, 1992). As society grows ever more complex and the demands of adult life increase, schools will feel growing pressure to insure that *all* students will succeed after school. Already some states, recognizing the need for transition services for all high school students, have established school-to-work initiatives and school-business partnerships. Transition models developed by special educators will serve to inform and improve the transition options available for every student and become commonplace activities in the schools of the future.

## Diverse Environments

The special needs of students with disabilities in rural and urban school programs as well as those in correctional facilities present education professionals with many pressing concerns. Schools in rural areas experience the constraints of difficulties in providing transportation, problems in recruiting and retaining special educators, and limited availability of special services (Berkeley & Ludlow, 1991), but they also offer advantages of community partnerships, parent involvement, and professional collaboration. Urban schools, especially in inner-city areas, face personnel shortages and turnover as well, but they also address issues such as cultural differences and bilingual learning (Rousseau & Davenport, 1993). The growing number of youth in correctional facilities need educational programming that develops social and vocational as well as academic abilities to assist them in adapting to society's demands. Efforts to address rural, urban, and correctional special education issues will become the focus of intervention research, policy development, model program design, and public funding initiatives in the next century.

## Conclusion

Special education, focusing interest and effort on the most vulnerable citizens, is a microcosm of society as a whole and even a harbinger of broader social change. Consequently, the policies and practices that are hot topics for today's special educators soon become key components of tomorrow's society. Major federal legislation, including the Individuals with Disabilities Education Act and the Americans with Disabilities Act, by prohibiting discrimination and segregation and championing integration and inclusion, have profoundly affected how today's schools and community agencies provide education and other social services to children and adults with disabilities. Whatever the future holds for students with special needs, special educators, and agencies that provide special education services, the outcomes will no doubt have fundamental implications for the meaning of education as well as the purpose of schooling in a democratic system, a changing economy, and a global world order in the early years of the 21st century.

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